



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

5 POST OFFICE SQUARE SUITE 100

BOSTON, MASSACHUSETTS 02109-3912

September 4, 2014

Christopher Stone, P.E.
Water Permitting and Enforcement Division
Bureau of Materials Management and Compliance Assurance
Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Dear Mr. Stone:

Thank you for the opportunity to review the draft small municipal separate storm sewer system (MS4) general permit. EPA appreciates DEEP's efforts addressing the action items identified in the Permit Quality Review (PQR) completed in 2013. Items addressed include connecting water quality requirements with the permit conditions, including anti-degradation provisions, enhanced illicit discharge detection and elimination requirements, and inclusion of site inspections for construction projects.

Below are the Agency's comments on the draft general permit, by section, and the Fact Sheet.

Overall General Comments

Two significant improvements from the 2004 general permit include specific requirements for the implementation of the six minimum control measures and provisions to address water quality including addressing discharges to impaired waters. At times, the draft permit lacks clearly defined endpoints/targets for conditions that require the development or implementation of a plan or procedure. In order to help ensure the enforceability of the permit, it should contain clearly defined endpoints. Specific circumstances where additional clarity is needed are identified in the sections below.

Section 2 - Definitions

1. Appears to be a word missing for the following definition – " " means a tidal wetland location outside of coastal waters". (page 2 of 55)
2. Illicit discharge – consider using the definition in 40 CFR 122.26 (b)(2). Illicit discharges are typically associated with discharges into a storm sewer system. As currently written this refers to discharges into a water of the state.
3. Effective impervious cover – Typically, effective impervious cover (area) is the portion of the total impervious area of a site that is directly connected to the drainage system. What is the basis for the 0.7 or greater runoff coefficient included in the definition contained in the draft

permit? How is the drainage area for each site defined for calculation? Within the context of the MS4, how does the permit define a "site"? If a residential area has a runoff coefficient of 0.6, what does that mean as far as determining the effective impervious cover? The fact sheet and administrative record should explain DEEP's modification to the traditional definition of effective impervious cover and its implications within the context of the permit.

4. Maximum Extent Practicable – There is no regulatory definition of MEP in 40 CFR 122.2 and this reference should be deleted. MEP is mentioned in 40 CFR 122.34(a) and discussed in the preamble to the Phase II rule. Consider use of one of these sources as a reference.
5. Small MS4 – consider using the definition found in 40 CFR 122.26(b)(16).
6. Total Maximum Daily Load – consider using the definition found in 40 CFR 130.2(i).
7. Water Quality Volume – Unclear if the volume is associated with the entire site or only the impervious areas of the site. Is the term "site" defined in the manual? Consider inclusion of the definition into the permit.

Section 3 – Authorization Under This General Permit

1. Some of these conditions are "limitations on coverage" verses "requirements for authorization." Consider adding a section that details what discharges are not covered by the permit. It is unclear what actions need to be taken by a permittee for compliance with paragraphs (b)(4) and (b)(5). Discharges to a POTW and discharges to ground water would not typically be addressed in an MS4 permit and it is not clear what is expected by the permittee. It is also unclear what is expected if a permittee has a new or increased discharge to impaired waters. The draft permit contains no requirements in this section.
2. Paragraph (9) – For clarification, the professional engineer who certifies the plan is NOT the same one who prepared it, is that correct?
3. It appears that the effective date will be some time after the date of issuance. What is the anticipated timeframe between the issuance date and the effective date?
4. The draft permit is unclear about the date of authorization. The draft permit includes four alternatives, does DEEP make that determination? This should be more clearly stated in the draft permit.
5. This draft permit indicates that it will be effective in the entire state. It is not clear what process was used by DEEP to designate municipalities located outside of an urbanized area. This should be explained in the administrative record and fact sheet.
6. The draft talks about "re-designation", but it is unclear exactly what this means. The criteria for re-designation is similar to criteria used in the federal program to allow a regulated MS4 to obtain a waiver from the permit requirements. As currently written, it appears that there are no waivers from the program as described in 40 CFR 122.32(c). "Re-designation" allows a Tier 1 MS4 to become a Tier 2 MS4, but Tier 2 MS4s are still subject to the requirements of the permit. The paragraph in the draft permit does contain the term "waiver", consider use of a different terms since it does not appear that waivers are allowed.

Section 4 – Registration Requirements

1. Does the state view non-traditional municipalities different than traditional municipalities which is why there is a different fee structure?

2. Clarification - The map required only is a map of the municipality and the boundary of its storm sewer system and is not required to include location of outfalls or other structures, is that correct?
3. What is the municipality supposed to do with the comments submitted on its Annual Report? As written it appears that nothing has to be done to address the comments. Consider requiring that the MS4 report on the comments received and their responses to those comments. If there is no acknowledgement of the comments, what is the purpose of soliciting comments?

Section 5 – Requirements of this General Permit

1. What are the “certain” discharges that part (a) applies to?
2. The requirements in paragraph (a)(3), (a)(4) and (a)(5) seem appropriate for all discharges, why are they only applicable to “certain discharges”?
3. Anti-degradation requirements are associated with the state Water Quality Standards. As currently written, the permit implies that MEP practices are sufficient to meet the state anti-degradation policy which means they are sufficient to meet water quality. Is that DEEP’s intention. Does DEEP have a basis for this determination? Any basis should be supported in the fact sheet and administrative record. EPA recommends that the reference to “Maximum Extent Practicable” be deleted from paragraph 5(a)(6) and the paragraph be rewritten to include reference to WQS Section 22a-426-8 paragraph (g)(2) in situations where a new or increased discharge is proposed that will not prevent discharge of the Water Quality Volume.
4. The term “stormwater pollutant of concern” appears throughout the draft permit and should be defined.
5. The Stormwater Management Plan should be designed to also satisfy the appropriate requirements of the state clean water act as well as the federal Clean Water Act. Language indicating this expectation should be included.

Section 6 – Development of Stormwater Management Plan (the Plan)

An overall comment for this entire section is that it needs to contain clear and enforceable conditions and expected outcomes. Frequencies of actions should be specified and expected completion dates should be stated. The draft permit focuses on nitrogen, phosphorus, bacteria and mercury as pollutants of concern. While stormwater discharges are known to contain those pollutants, they are known to also contain sediment, heavy metals (copper, lead and zinc) and hydrocarbons. DEEP is encouraged to consider the inclusion of additional measures to address these pollutants.

Tier 1 Minimum Control Measures

Public Education and outreach

1. Paragraph (a)(1)(A) – Consider the inclusion of language such as “including but not limited to” when describing the method for distribution of educational materials.
2. Include a specific target such as a specific number of messages or a frequency of message distribution.
3. Mercury is only one of several metals that may be a concern for municipal stormwater discharges. Consider the inclusion of other metals associated with urban runoff such as copper, lead and zinc.

Illicit discharge detection and elimination

1. The definition of illicit discharge is different than the one in Section 2. They should be consistent.
2. (a)(3)(A)(iii) – Should also include the date and results of resampling of the outfall (after removal) to confirm all contamination has been removed.
3. Consider expansion of the mapping requirement to include the entire system. This appears to be required in Appendix B. There should be a clearer connection between the requirements in this part and those in Appendix B.
4. The permit has been in place since 2004 which is more than enough time for municipalities to have completed a number of investigations of their system for illicit discharges. The time frames provided for implementation of the program elements is extremely generous especially for the larger municipalities. EPA encourages DEEP to require a more expeditious schedule. Consider inclusion of a statement that the timelines presented in the table are the required percentages of the system that has been investigated versus the implementation of the program elements.
5. (a)(3)(C) – The regulations do not limit the mapping of outfalls to those that are 12 inches or greater in diameter. 40 CFR 122.26(B)(3) requires mapping of all outfalls with no differentiation regarding size. This must be changed to be consistent with regulations.
6. (a)(3)(D) – It is unclear why there is a focus on addressing septic system failures. Septic system failures are a small part of illicit discharges and there are several other sources of phosphorus, nitrogen and bacteria besides septic systems that should be identified. Consider changing the paragraph to state that catchments discharging to waters impaired by phosphorus, nitrogen or bacteria shall be a priority.

Construction Site Stormwater Runoff Control

1. (a)(4) – Great that the program addresses development and redevelopment from properties one half acre or more.
2. (a)(4)(A)(e) – This paragraph seems out of place in the section dealing with construction, perhaps it should be in the IDDE section and address the interconnections of municipalities.

Post Construction Stormwater Management

1. Effective impervious cover- How does the description of effective impervious cover tie into the definition in Section 2?
2. (a)(5)(B) – Is a municipal operator held to the same standards as a private developer? If this is the case the introductory paragraph should state that the requirements apply to “any responsible party”.
3. (a)(5)(B)(i) – Consider breaking up the paragraph into separate paragraphs for clarity.
4. (a)(5)(B)(iii) – Unclear what is expected from the municipality. Consider inclusion of a definition of “turf area.”
5. (a)(5)(B)(iv) – “Adequately protective” of what? Water quality? This should be clearly stated.
6. (a)(5)(C) – Is the expectation that permittees are tracking DCIA at the same time they are developing estimates of DCIA? This section requires DCIA estimates to all outfalls versus those that are mapped under the IDDE program. Is that the intention?
7. (a)(5)(E) – There are not timeframes for development of the retrofit plan. Timeframes should be included. Why is the focus only on sediment and erosion control problems for retrofits?

Pollution Prevention/Good Housekeeping

1. (a)(6)(A) – The frequency of required employee training shall be included.
2. (a)(6)(B)(i) – when does the program mentioned in this section need to be updated? The completion date should be specified. Is the update a one- time only, or continuous as information changes?
3. (a)(6)(B)(ii) – Language in this section requires the permittee to develop a program, there should also be requirements to implement the program that is developed along with a time frame for completion of the program.
4. (a)(6)(C)(i) – Consider deletion of “are inadequate” in the second sentence. It is unclear if the following practices related to pesticides and herbicides, lawn maintenance, and trash management are to be considered by permittees or are required to be implemented. Timeframe for establishment of grass clipping and leave disposal program should be stated.
5. Typo in the last sentence of this section, “be” should be deleted.
6. (a)(6)(C)(ii),(iii),(iv),(v), (vii)(a) and (b) – Timeframes for completion of tasks should be included.
7. The Sweeping schedule in Table 1 for parking lots is different than the schedule in Paragraph (a)(6)(C)(vi). Consider placing the requirements for sweeping into one place. The fact sheet should include some discussion about why the frequencies outlined in Table 1 constitute Maximum Extent Practicable. EPA’s original 2008/2010 draft MS4s contained requirements for sweeping sidewalks. The Agency received significant negative comments on this, DEEP should ensure that sufficient information exists within the administrative record of the draft permit to support the proposed sidewalk sweeping and other sweeping frequencies.
8. (a)(6)(C)(x) – The term “catchment area” is used in the paragraph for the first time. It should be defined. Are catch basin inspections required for those serving any water that is impaired for any pollutant?
9. (a)(6)(C)(xi) – This paragraph seems out of place in this section. Consider moving it to be a part of the illicit discharge section and require mapping of the locations where one municipality is interconnected to another.
10. (a)(6)(C)(xii) – This requirement is vague and it is unclear what is expected of municipalities. It appears that the municipality is expected to address any and all sources of stormwater into its system regardless of the source, volume or potential to contribute pollutants. Consider a more narrow scope such as a focus on pollutants that are significant contributors or specific sources within the board categories.
11. (a)(6)(D)(i)(a) – A deadline for implementation of the turf management practices and procedures policy should be specified. It is unclear how this requirement differs from the requirements in paragraph (a)(6)(C)(i). Does this requirement apply with or without an approved TMDL?
12. (a)(6)(D)(ii)(a) – Is the expectation of the retrofits required by this section that the stormwater discharges will be treated to a level to achieve bacteria water quality standards? There should be a deadline specified for completion of the program described.

Tier 2 Minimum Control Measures

As in the previous section (Tier 1 Minimum Control Measures), the permit should include specific deadlines for implementation and completion of programs. The Tier 1 comments on public education are also applicable to the Tier 2 municipalities.

1. Clarification – For the illicit discharge program, Tier 2 municipalities are not required to develop a map, and do not have to develop an actual program to find and remove illicit connections only the authority to do it. Is this accurate?
2. If a Tier 2 municipality finds an illicit discharge, what are its obligations and what are the timeframes for them to address it?
3. It is unclear the purpose of a program to address reports of “illicit discharges with a high potential to discharge bacteria, phosphorous, and nitrogen”. Since all illicit discharges are illegal, why is the report limited only to those? How will this information be known without investigation?

Sharing responsibility

1. (c) (1) – A qualifying local program is described in 40 CFR 122.34(c). The language in the contained in this paragraph is consistent with 40 CFR 122.35. Consider a different heading or define the term “qualifying local program” according to a state specific regulation or policy.
2. (c)(2) – The language “...the permittee it not responsible for its implementation if the third party fails to perform...” is contrary to language in the regulations. Language in 40 CFR 122.35(a)(3) states “...You remain responsible for compliance with your permit obligations if the other entity fails to implement the control measure (or component thereof)...” This language should be changed to be consistent with regulations.

Monitoring requirements

Due to the significant number of parameters consider allowing the use of field test kits for appropriate parameters. What is “uncontaminated rainfall”? How will a permittee ensure that they have collected an appropriate sample of the rainfall?

1. Clarification – For wet weather outfall monitoring, the total number of outfalls monitored is 16, 32, and 48 for municipalities less than 15,000, municipalities 15,000 – 50,000 and municipalities greater than 50,000, respectively. Is this correct?
2. (j)(6)(A) – Consider inclusion of a listing of parameters that must be monitored. See Appendix of the draft NH small MS4 as an example.
3. (j)(6)(C) – Other than making note of a non-detect, is any additional monitoring required?

Discharges to Impaired Waters or Water bodies subject to a Pollutant Load Reduction within a TMDL

1. (l)(1)(A) – The conditions in this section imply that a permittee only needs to implement the MEP requirements in section 6(a) and 6(b) and these are sufficient to address impairments associated with phosphorus, nitrogen, bacteria and mercury. What is the basis associated with the determination that no additional measures are needed to address impairments? The basis for this determination should be included in the fact sheet and administrative record.
2. (l)(1)(B) – How will a permittee know what to do for each impairment? Will DEEP be providing guidance or direction to the regulated community regarding appropriate practices to reduce pollutants other than the four identified in the previous paragraph? An example of this can be found in the NH draft small MS4 permit (available at http://www.epa.gov/region1/npdes/stormwater/MS4_2013_NH.html).

3. (I)(2)(B) – Will DEEP provide guidance to permittees about control measures that are consistent with the WLA of an approved TMDL? How will DEEP determine compliance with this provision?
4. (I)(2)(C) – In an effort to aid permittees in understanding their obligations regarding consistency with WLAs of approved TMDLs, the permit should specify which permittees are subject to which TMDLs and what measures are necessary for demonstrated compliance. The permit should also specify a target timeframe for achievement of the WLA. Appendix F of the NH draft small MS4 is an example.
5. (I)(3) - How will the term "site" be determined in dealing with a municipal system?
6. (I)(4) - Clarify what is meant by "follow the discharge consistent with applicable Wasteload Allocation".
7. The Long Island Sound (LIS) has established necessary reduction of nitrogen from sources both inside and outside the basin. The permit should more clearly express the requirements to ensure reductions from the within basin sources and include more specific provisions for the communities to submit a nitrogen reduction plan by a specific date. The permit should include a requirement to track reductions achieved through the implementation of BMPs and/or retrofits. The permit requirement should complement the current LIS TMDL efforts that are underway. We would be happy to discuss this further.
8. Approved TMDLs that address pollutants other than nutrients and bacteria should be included in the permit. One example is the Eagleville Brook impervious cover TMDL.

Appendix A2 – Tier 2 Municipalities

The definition of Tier 2 municipalities states that these are not Tier 1 municipalities. Tier 1 municipalities are those located within an Urbanized Area. The title "Connecticut Municipalities with <1000 People in the Urbanized Area" implies that these municipalities are in fact Tier 1 because they are located in an urbanized area. The title should be changed to remove references to an urbanized area or if these are actually in an urbanized area, then the definition of Tier 2 should be changed.

Appendix B

1. A.1-Not very clear if this means ALL outfalls must be screened. If it is all outfalls, how does this blend with the requirement that only 12" or greater outfalls need to be identified and mapped? The expectation should be clearly expressed.
2. A.4 - The requirement for a dry period is unenforceable if the municipality can modify it without any justification or recording.
3. A.4. – Consider allowing collection of samples to occur on a different day than the screening, because it is easier logistically. Screening is logistically easy because it allows many outfalls to be easily screened on a single day, or several screenings fit in any time an employee has a free hour or two. But collecting bacteria samples requires advance preparation (arranging with lab to take samples, getting an ice chest and ice for preservation) and then requires bringing samples to the lab within the holding time and so forth. Because most outfalls do not have dry weather flow, it is more efficient to take many days screening outfalls, then a single day dedicated to sampling those that have dry weather flow.
4. A.4.e.ii – Consider the inclusion of enterococcus as an indicator for discharges to marine waters, is probably a better indicator than *E. coli*.
5. A.4.f – Are field test kits allowed for these samples? This should be stated clearly if allowed.

6. B.1- It appears that the references to various sections may be incorrect.
7. B.1 – It is unclear what an 'outfall drainage area' is. The draft permit using several terms which appear to be describing the same thing. Consider using one term consistently or if the need for several terms is necessary, each should be defined to eliminate any confusion.
8. B.3.a – This section should be more closely connected to the mapping requirements found in Section 6. The language in Section 6 focuses only on outfalls, but the language in Appendix B requires system mapping. The language in Section 6 should specifically reference the mapping requirements of Appendix B.
9. B.3. a.i--- The mapping elements should be more explicit than "Municipal separate storm sewer system". The permit should list the specific elements of the system to include such as all outfalls, all pipes, all catch basins, and any other structural storm controls.
10. B.4.c – same comment regarding dry period as for A.4
11. B.4. d – The requirements of this section are similar to the Outfall observations requirements in part A. It is DEEP's intent that another screening is required? If this is not the intent, the draft permit needs to make a clearer connection between these two requirements.
12. B.4.d.i – Region I's experience has been that wet-weather sampling often reveals illicit discharges that were not revealed during dry weather (often, dry weather flow patterns result in illicit discharges not leaving the system). EPA recommends including wet-weather sampling as part of an illicit discharge investigation.
13. B.4.d.ii– The section might be written to acknowledge that there are culverts where flow entering system is not groundwater (even if simple straight-through pipe culverts under a single road aren't considered part of the MS4, there are many situations where streams flow into a large, connected, part of the system).
14. B.4.d.ii – The sampling/testing requirements are a bit redundant with A.4. Does the permit envision sampling and testing twice (once during screening under A and once during investigation under B)?
15. B.4. d. iii.e. – EPA experience has found limited value in the use of smoke testing to locate an illicit connection. For example, it won't reveal a failed sewer line leaking into the storm sewer or a failed joint manhole. Consider smoke testing as a tool and not a mandatory requirement.
16. B.4.d.iii.g. – Consider the use of dye testing as an option verses a requirement. While dye testing is a reasonable test, different situations might make other next steps more appropriate such as CCTV of the storm drain.
17. Consider incorporation of material from EPA Region I's IDDE protocol. This was developed based on many years of experience and started with the Pitt protocol. (Attachment 3 of the NH MS4 fact sheet available at: <http://www.epa.gov/region1/npdes/stormwater/nh/2013/NHMS4-FactSheet-2013-WithAttachments.pdf>)
18. B.4.f- This condition offers a variety of testing possibilities, which conflict with B.4.d.iii.e and g which require smoke testing then dye testing. Consider allowing each individual municipality to determine the appropriate tools to use to isolate an illicit connection/discharge.
19. B.4.h – EPA is pleased that the draft permit includes a requirement to verify that the illicit connection has actually been removed.
20. B.4.i – EPA recommends inclusion of a requirement to revisit outfalls on a periodic basis after removal verification (every 3 to 5 years). While a single same could lead to a tentative conclusion that the alignment is clean, it is not necessarily conclusive.

21. B.4.j.- Ensure that the schedule in this section is consistent with the schedule in Section 6. Also ensure that references are correct, section 4.a mentioned in this paragraph is one about notifications.

Appendix D – Impaired Waters Guidance

1. Is the material in Appendix D the only information provided to municipalities on (1) what impaired waters they may have to consider; (2) what pollutants are causing impairment in those waters; and (3) what TMDLs are in place for phosphorus, nitrogen, and bacteria? When specific WLAs are provided in a TMDL, these should be included in the permit to inform the regulated municipality.
2. Are there other CT TMDLs in watershed with stormwater related metals targets or impervious cover targets? These should be included in the permit.
3. Why doesn't Appendix D list the WQS criteria for nitrogen, phosphorus and mercury as it does for bacteria?

Fact Sheet

1. The fact sheet does not contain all the elements required by 40 CFR 124.8(b). Elements missing from the fact sheet include:
 - (b)(4) – Brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record.
 - (b)(6) – A description of the procedures for reaching a final decision on the draft permit including: (i) The beginning and ending dates of the comment period under §124.10 and the address where comments will be received; (ii) Procedures for requesting a hearing and the nature of that hearing; and (iii) Any other procedures by which the public may participate in the final decision.
 - (b)(7) – Name and telephone number of a person to contact for additional information.
2. Sources for the two quotes contained in the third paragraph of page 1 should be included.
3. Under the section entitled "Changes in Coverage", there is a statement about "significant Urbanized Areas". What does this term mean? The stormwater program regulates municipalities located in urbanized areas without any modifier. If the DEEP has created a subset of urbanized areas, then this terminology should be included in the definition section of the draft permit.
4. The fact sheet must contain a clear basis for the designation of municipalities not designated in 40 CFR 122.32(a)(1). Regulations allow for designations under 40 CFR 123.35(b)(3); (b)(4); 122.26(f) or 122.26(a)(9)(i)(C) or (D). Whichever authority DEEP used to include municipalities not located in the Census defined urbanized area should be clearly articulated in the fact sheet.

Again, thank you for the opportunity to comment. If you would like to discuss any of the comments in more detail, feel free to contact me at 617-918-1615.

Sincerely,



Thelma Murphy, Chief
Stormwater and Construction Permits Section